



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,724	04/21/2004	Lucy G. Hosking	15436.307.1	8563
22913 7590 03/19/2008 WORKMAN NYDEGGER 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111				
EXAMINER BLEVINS, JERRY M				
ART UNIT 2883		PAPER NUMBER		
MAIL DATE 03/19/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/828,724

**Applicant(s)**

HOSKING, LUCY G.

**Examiner**

JERRY BLEVINS

**Art Unit**

2883

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 11-17, 30, 32-38 and 40-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9, 11-17, 30, 32-35 and 40-46 is/are allowed.
- 6) ☒ Claim(s) 36-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 21, 2008 has been entered.

### ***Response to Arguments***

Applicant's arguments, see pages 13-16, filed February 21, 2008, with respect to claims 1-9, 11-17, 30, and 32-35 have been fully considered and are persuasive. The rejection of claims 1-9, 11-17, 30, and 32-35 has been withdrawn.

Applicant's arguments filed, see page 16, filed February 21, 2008, with respect to claims 36-38 have been fully considered but they are not persuasive.

Specifically, applicant's request to withdraw the rejection of claim 36 on similar grounds as to that of claim 30 is not persuasive. Claim 36 lacks the distinguishable feature of impedance minimization due to the integration of the circuitry as found in claim 30. Furthermore, claim 36 also lacks the distinguishable features of distinct transmitter, receiver, and host circuitry as found in claim 1. As such, examiner

maintains that the subject matter of claim 36 is rendered obvious by the previously applied prior art reference to Aronson et al., WO 02/063800 A1.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aronson.

Regarding claim 36, Aronson teaches a substrate (Figure 2) that includes a power line (19) and a conductive path (page 3, line 12 – page 4, line 3); a laser driver (105) including a current source for driving a laser; a post amplifier (104) for amplifying a signal received from a photodetector; and control circuitry (102) including laser control and processing control, the control circuitry mounted on the integrated circuit substrate (Figure 2), the control circuitry directly connected to the laser source and to the photodiode (Figures 2 and 3, page 3, line 12 – page 4, line 3), the control circuitry including a memory portion (Figure 3, element 120), the memory portion including one or more memory components for receiving and storing data. Aronson does not teach that the components are all on one integrated circuit. It would have been obvious to one of ordinary skill in the art at the time of the invention to integrate the assembly of Aronson on an integrated circuit, since it has been held that the use of a one piece

Art Unit: 2883

construction instead of the non-integrated structure of the prior art would be merely a matter of obvious engineering choice. In re Larson 340 F 2d 965,968, 144 USPQ 347,349 (CCPA 1965). The motivation would have been to reduce the size of the assembly.

Regarding claim 38, Aronson teaches a laser source and a photodiode and that the control circuitry is directly connected to the laser source and the photodiode (Figures 2 and 3, page 3, line 12 – page 4, line 3).

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aronson in view of US 6,985,645 to Cohen et al.

Regarding claim 37, Aronson renders obvious the limitations of the base claim 36. Aronson does not teach a transimpedance amplifier. Cohen teaches a processing control communicably connected with a transimpedance amplifier (column 9, lines 12-24). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Aronson with the transimpedance amplifier of Cohen. The motivation would have been to achieve electrical amplification of the signal (column 9, lines 12-24).

#### ***Allowable Subject Matter***

Claims 1-9, 11-17, 30, 32-35, and 40-46 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, the prior art, as best exemplified by Aronson, fails to disclose or render obvious an assembly comprising a transmitter optical assembly including a laser control, a receiver optical assembly including a processing control, and a host CPU. Rather, it appears that Aronson teaches an assembly comprising a transmitter optical assembly (103), a receiver optical assembly (102), and a host CPU (110) which also serves as a laser control and a processing control. However, neither the TOSA (103) nor the ROSA (102) includes individual control circuitry integrated within the respective subassembly. Furthermore, the integration of the host CPU (110) into either or both of TOSA (103) or ROSA (102) to serve as laser control and processing control would necessitate the an additional host CPU external to the TOSA and the ROSA in order to meet the current claim limitations. The substitution of a single host CPU for three separate units appears to be non-obvious.

Regarding claim 30, the prior art, as best exemplified by Aronson, fails to disclose or render obvious that the integration of the modulator, post amplifier, and processor serves to minimize impedance that would otherwise be present in the high frequency electronic data communication. While US 2003/0085452 to Brezina teaches minimization of impedance of high frequency data communication using transceiver components, it too is silent with regards to minimization of impedance directly arising from the integration of those components.

Claims 2-9, 11-17, 32-35, and 40-42 are allowed due to their dependence from allowed base claim 1.

Claims 43-46 are allowed due to their dependence from allowed base claim 30.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRY BLEVINS whose telephone number is (571)272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jerry M. Blevins/  
Patent Examiner, Art Unit 2883

/Frank G Font/  
Supervisory Patent Examiner, Art Unit 2883

03/12/2008  
FGF/jmb